Exhibit A4B

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY CROCKER WIND FARM, LLC FOR A PERMIT FOR A WIND ENERGY FACILITY AND A 345 KV TRANSMISSION LINE IN CLARK COUNTY, SOUTH DAKOTA, FOR CROCKER WIND FARM

SD PUC DOCKET EL-17-055

UPDATED PREFILED TESTIMONY OF ELIZABETH ENGELKING ON BEHALF OF CROCKER WIND FARM, LLC

March 21, 2018

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Elizabeth Engelking. I am Vice President for Strategy and Policy at Geronimo Energy, LLC ("Geronimo"), located at 7650 Edinborough Way, Suite 725, Edina, Minnesota.

Q. Please describe your background and your duties.

A. I received my MBA in finance and economics from the Carlson School of Management at the University of Minnesota in 1986. From 1988-98, I was employed as a rate analyst with the Minnesota Public Utilities Commission, where I oversaw the implementation of Integrated Resource Planning and advised on utility resource planning, ratemaking, and industry restructuring issues. In 1998, I joined Great River Energy, where I worked as a transmission analyst and later as Manager of Resource Planning, where I directed the development, filing, and acceptance of two Integrated Resource Plans in Minnesota. From 2004-11, I worked as Xcel Energy's Director of Resource Planning and Bidding, where I was responsible for developing Integrated Resource Plans and long-term generation planning and acquisition. In 2012, I joined Geronimo, and I currently serve as Vice President for Strategy and Policy. My responsibilities include oversight over Geronimo's regulatory and legislative matters, as well as evaluation of commercial markets for wind and solar energy. My resume was previously filed as Exhibit 1.

Q. What is the relationship between Crocker Wind Farm, LLC ("Crocker" or the "Applicant") and Geronimo?

A. The Applicant is a wholly-owned subsidiary of Geronimo. Geronimo is a leading full-service North American renewable energy company based in Edina, Minnesota, with satellite offices in southwest Minnesota, North Dakota, South Dakota, Illinois, Colorado, New York, and Michigan. Geronimo provides renewable energy development solutions for utilities and corporations looking to harness renewable energy for business growth. Geronimo has developed several operating wind farms

and solar projects throughout the United States. Over 1,600 megawatts ("MW") of wind projects and solar projects developed by Geronimo are either operational or currently under construction. Geronimo has a multi-gigawatt development pipeline of wind and solar projects in various stages of development throughout the United States.

II. OVERVIEW

Q. What is the purpose of your Direct Testimony?

A. The purpose of my testimony is to discuss the commercial demand for the Crocker Wind Farm ("Project"). I will also discuss the impacts permitting delays would have on the Project.

Q. Please identify the portions of the Energy Facility Permit Application ("Application") that you are sponsoring for the record.

A. I am sponsoring the following portions of the Application:

- Section 2.1: National and State Energy Demand
- Section 2.2: Renewable Power Demand by Utilities

III. RENEWABLE ENERGY STANDARDS

Q. Does South Dakota have renewable energy standards?

A. Yes. In 2008, South Dakota enacted legislation establishing an objective that 10 percent of all retail electric sales in the state be obtained from renewable and recycled energy by 2015, with reporting required through 2017. *See* SDLC § 49-34A-101. In 2009, the statute was amended to allow conserved energy as a component, and it was reported in 2016 that a majority of the electric providers in South Dakota met this goal. South Dakota has additional regulatory policies, financial incentives, and technical resources aimed at encouraging energy efficiency and the expanded use of renewable sources for electric generation, such as property tax incentives and alternative taxation calculation.

Q. Do other states in the region also have renewable energy standards?

A. Yes. For example, Illinois requires certain utilities to obtain 25 percent of eligible sales from renewables by 2025.[1] Similarly, North Dakota has adopted the national "25 by 25" initiative, which establishes a goal of having not less than 25 percent of total energy consumed within the United States come from renewable resources by January 1, 2025.[2] Likewise, Minnesota utilities are required to provide 25 percent of their total retail electric sales from eligible renewable resources by 2025.[3] Although 15,147 MW of wind power capacity have been installed throughout the Mid-continent Independent System Operator ("MISO") footprint,[4] the regional need for electricity, and the potential to produce renewable resources from wind, far exceeds this number.[5]

IV. PROJECT DEMAND AND OFFTAKE

Q. What information did you evaluate concerning the demand for renewable energy in the region?

A. As an independent power producer ("IPP"), Crocker is not limited to the needs of one region and is capable of selling to multiple wholesale consumers across the region. Therefore, I evaluated the demand for wind energy in South Dakota and surrounding states from both electric utilities and commercial, industrial, and institutional ("C&I") customers. For electric utilities, I reviewed the most recent integrated resource plans of a number of utilities, which confirm that utilities are seeking additional renewable generation resources in the next several years. For

[1] 20 Ill. Comp. Stat. sec. 3855/1-75(c)(1).

[2] *See* N.D. Cent. Code. § 17-01-01.

[3] Minn. Stat. § 216B.1691.

[4] *See* American Wind Energy Association, *Annual Report 2015*, at 98.

[5] *See id.* at 65 (describing wind capacity in the upper Midwest); MISO, MISO Transmission Expansion Plan 2015, at 102 (explaining that certain proposed transmission projects will facilitate the interconnection of "41 million MWh of wind energy to meet renewable energy mandates and goals"), https://www.misoenergy.org/Library/Repository/Study/MTEP/MTEP15/MTEP15%20Full%20Report.pdf.

both electric utilities and C&I customers, I considered active requests for proposals ("RFPs") for wind energy. Over the past year, Geronimo has received eight utility and eight C&I power supply proposal requests for which the Project would qualify, indicating a demand for the output that will be produced by the Project. Additionally, I have considered general market information on commercial demand for renewable energy.

Q. Why did you consider a broader region for evaluating demand for the Project?

A. As an IPP, Crocker is not confined to a single set of customers or a defined service territory. Further, the advent of Regional Transmission Operators ("RTOs") has increased the area over which energy can be economically traded. Crocker is uniquely situated in the vicinity of major transmission lines for both the MISO and the Southwest Power Pool ("SPP"), allowing us to market the Project across a broad region, stretching from South Dakota to Indiana and down to Texas. In addition, because many corporate contracts are settled financially instead of physically, corporate customers for the Project could be located anywhere in the United States. In a financial settlement, a customer does not take physical delivery of the electricity. Instead, the energy is sold into the regional market and the customer receives a financial settlement that reflects the difference between what they paid and what the power sold for in the market.

Q. Is there a demand for renewable energy, such as that which will be produced by the Project, in the region?

A. Yes. Utility long-range demand in the Midwest shows the intent to purchase approximately 1,000 MW of wind energy over the next five years. This increased demand is evident through the utilities' integrated resource plans, as described in Section 2.2 of the Application. In addition, as the cost of renewable energy has decreased, C&I demand for renewable energy has increased, creating a new market to obtain a power purchaser. For example, in 2016, approximately 1,600 MW of

wind energy was purchased by the C&I sector.[6] Further, in a recent survey of more than 150 commercial customers with annual revenues greater than $250 million, 84 percent of respondents indicated that they planned to actively pursue or consider directly buying renewable energy.[7] Thus, the Project will help meet the regional and/or C&I need for renewable energy produced in South Dakota.

Q. Does the Project currently have an offtake agreement?

A. Yes. Crocker recently executed a PPA for 150 MW of the Project's output. At this time, pursuant to the terms of the agreement, Crocker is not at liberty to disclose the purchaser's identity. However, Crocker can confirm that the purchaser is a Fortune 100 company and is not a Commission-regulated utility.

In addition, Crocker is in active discussions for an additional 50 MW, but has not yet executed an offtake agreement. This agreement is anticipated to be finalized by the end of the Second Quarter or beginning of the Third Quarter of 2018, which would bring the total output under contract to 200 MW.

Q. Does having 200 MW of the Project's potential output under contract change Crocker's plans for the timing of construction?

A. No. Consistent with the Direct Testimony of Rob Copouls (see Page 3, Lines 87-92), Crocker plans to begin construction of the 200 MW of output anticipated to be under contract as soon as all permits and approvals have been secured, which could be as early as Second Quarter 2018.

Q. Will only a portion of the Project Area be used to construct the 200 MW under contract?

[6] Renewable Choice Energy. "The Rise of the Corporate Energy Buyer." View August 29, 2017. https://www.renewablechoise.com/blog-corporate-energy-buyer/.

[7] APEX Clean Energy and Green Biz. "2017 State of Corporate Energy Renewable Procurement" September 2017

A. It depends on the turbine model selected. As discussed further in my testimony below and in the Direct Testimony of Barry Fladeboe (see Page 8, Lines 12-19), Crocker has not yet selected a turbine model. As such, the area that will be used for the 200 MW under contract will depend on the turbine model ultimately selected. As discussed in Section 4.0 of the Application, the proposed configuration consists of 120 turbine locations. If a 2.0 MW turbine is selected, then all but 20 locations would be utilized. Further, since Crocker has committed to using the 14 turbines located on USFWS grassland easements only if they are approved by the USFWS, there could be as few as 6 alternate locations. Conversely, if a larger megawatt turbine is selected, fewer turbine locations would be needed for the 200 MW.

Q. If only a portion of the Project Area is used to construct the 200 MW under contract, what are Crocker's plans with respect to the remainder of the Project Area?

A. As described in the Application, the Project is designed for up to 400 MW of output, with the ultimate output dependent upon securing offtake arrangements. Crocker continues to actively market the sale of up to 200 MW of additional output. However, additional output would only be constructed within the Project Area to the extent feasible using the proposed turbine configuration. Further, if timing, engineering, or other factors resulted in the need for a separate project – as opposed to an addition to the initially constructed 200 MW – Crocker would seek a separate permit for that project from the Commission.

Q. Does the Applicant commit to continuing to provide the South Dakota Public Utilities Commission ("Commission") with updates concerning the Project's offtake agreements during this permitting process?

A. Yes. Crocker will update the Commission regarding Project offtake as there are new developments.

Q. Where will the power produced by the Project be used?

A. Electricity generation by the Project will enter the transmission grid in South Dakota and will follow the path of least resistance in terms of where it is used. Even if the power is purchased by an out-of-state buyer, the actual electricity produced will remain near the Project and will meet general energy needs in South Dakota and the surrounding region.

Q. Should the Commission be concerned about the economic impacts of this facility on South Dakota ratepayers?

A. No, not at this time. Crocker is an IPP that does not serve retail customers in South Dakota. As an IPP, Crocker is entirely at risk for the cost of the facility. Additionally, as noted above, Crocker's recently executed PPA is not with a utility regulated by the Commission. To the extent Crocker enters into future contracts with a public utility that serves retail customers in South Dakota, the Commission has regulatory oversight over those contracts and would consider impacts to ratepayers at that time.

V. OTHER ISSUES

Q. Why does the Application present multiple turbine models?

A. Crocker has not yet contracted for turbines for this project. Turbine supply agreements reflect a large capital investment in the project, and are frequently entered into after most major permits are received. Specifying a single turbine option at this time would make it difficult for Crocker to negotiate the best price for wind turbines. Negotiating turbine supply agreements in a competitive process with a number of suppliers will reduce the overall cost of the Project and benefit the Project offtakers.

Q. Why is the Applicant pursuing a permit from the Commission by June 2018?

A. The Federal Production Tax Credits ("PTC") for wind energy are currently in a five-year phasedown starting at 100% of the credits if a project qualified by the end of 2016. Once qualified, a project must be constructed within four years to receive the

tax credits without demonstrating continuous construction. The Project was qualified for the Federal PTC at the end of 2015, and thus needs to be operating by the end of 2019 to receive credits. Because long lead time items such as interconnection substation construction and equipment orders can take as many as 18 months, it is important for Crocker to receive the requested permits by June 15, 2018.

Q. Are there other consequences of Project delay?

A. Yes. If the Project is not constructed or is delayed, the efforts of the current power purchaser, as well as future power purchasers, to obtain renewable energy in a cost-effective and reliable manner would be in jeopardy. Additionally, Project costs are subject to commodity flux and rise. Therefore, if the Project is delayed, the greater the probability of a commodity price increase.

VI. CONCLUSION

Q. Does this conclude your Updated Direct Testimony?

A. Yes.

Dated this 21st day of March, 2018

_____

Elizabeth Engelking